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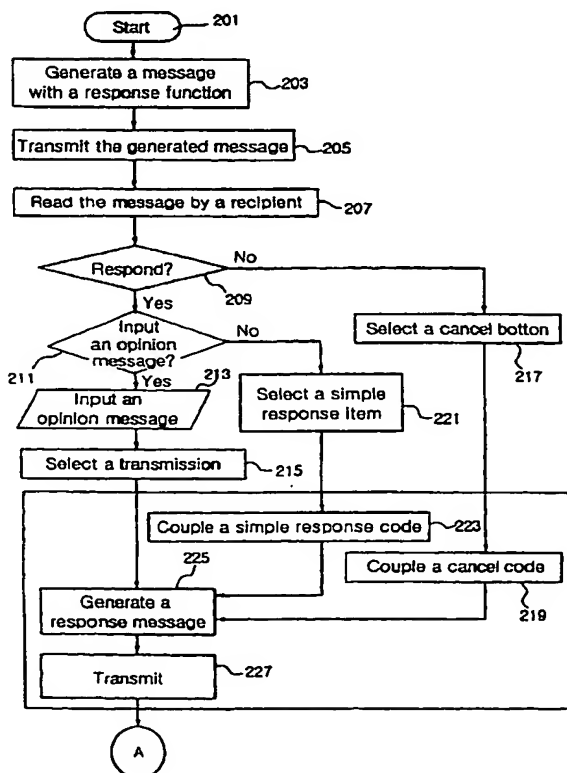
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(54) Title: **SYSTEM AND METHOD FOR COLLECTING DECISIONS OF RECEIVERS USING ELECTRONIC MESSAGE HAVING A RESPONSE FUNCTION**



(57) Abstract: A method for collecting decisions of recipients using an electronic message through an on-line communication network, the method comprising the steps of, generating an electronic message including at least one question, transmitting the electronic message to terminals of recipients, inputting his/her decision to each question on the transmitted message by the recipient, generating response data distinguishable by the questions and the recipients, the response data formed from recipient's opinions inputted on the message, and automatically returning the response data to a sender, statistically processing the returned response data according to the questions and the recipients, and outputting results of the processed response data is provided. Further, a system and a computer-readable recording medium for collecting decisions of recipients using an electronic message having a response function are provided. In accordance with the preferred aspects of the present invention, reply rate may be improved by randomly selecting persons to obtain free gifts from the recipients and revealing the selected results to the recipients only after the recipient responds to every questions of the message.

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# SYSTEM AND METHOD FOR COLLECTING DECISIONS OF RECEIVERS USING ELECTRONIC MESSAGE HAVING A RESPONSE FUNCTION

## Technical Field

5           The present invention relates to a system, a method and a computer-readable recording medium for collecting decisions of recipients using an electronic message having a response function, and more particularly to a system, a method and a computer-readable recording medium, which transmit an electronic message including questions to a plurality of recipients, receive response data automatically generated by  
10       expressing opinions of the recipients, and statistically analyze the received data.

## Background Art

As well known to those skilled in the art, a message transmission is generally achieved by an off-line postal mail, or by an electronic mail, or a character or voice mail via an on-line communication network. Recently, messages for transmitting  
15       notices of a sender have been also used as a means for requesting a recipient's response to a designated questionnaire. An invitation message for checking the number of participants of a certain meeting and an survey message are good examples.

However, it is difficult to use the message by the conventional transmission manner as the means for requesting a recipient's response, on account of the following  
20       problems.

First, the recipients are reluctant to draw up a response message and to return it, thereby lowering reply rate. Further, the use of the off-line postal mail requires additional cost.

When a sender sends message mail by post, the sender generally encloses a  
25       return envelope and a postage so as to request the recipient to return his/her reply to the

message. However, the recipient feels that this postal mail message inconvenient and troublesome, thus rarely replying to this mail message.

Compared to this postal mail message, an electronic mail message is comparatively convenient to reply to. Generally, via the electronic mail, a sender is capable of batch-transmitting a message to many recipients at a time, and since a sender's ID is stored in a recipient's terminal simultaneously with receiving the message, the recipients conveniently respond to this message. However, after reading the message, the recipient determines whether he/she desires respond to the message. Next, the recipient draws up his/her response and returns this response to the sender. Therefore, the recipient still feels that this electronic mail message is also inconvenient and troublesome.

Particularly, in case of the survey having a large number of questions, the sender draws up a document file including the contents of the questions separately from his/her message mail and this document file is accompanied with the message. After reading the message, if the recipient wants to respond to the questions, the recipient downloads this accompanied document file and draws up a response on the downloaded file. Then, the recipient accompanies this response file with the message and returns this message along with the response file back to the sender.

Secondly, since the recipients receive many mails including advertisement mails in a single day, they are not interested in such mails. Therefore, the recipients rarely participate positively to respond to the messages having many questions.

Particularly, in case of the survey having a large number of questions, used for marketing research by a certain enterprise, the aforementioned recipient's negative attitude may cause a serious public relations problem.

In order to solve this problem, the more convenient transmission or replay method, which is newly modified, has been developed. However, this modified

method still cannot improve the recipient's negative attitude and low reply rate. Therefore, a method to induce the recipient's positive participation is required.

Thirdly, even though the recipients respond to the message and return it to the sender, the returned response messages from plural recipients are very plentiful,  
5 thereby imposing excessive burden to statistically process and analyze the messages.

For example, when hundreds of recipients respond to tens of questions of the messages and return the responded messages to the sender, the statistical analysis of data of the returned messages according to a demographic group of recipients (the group being classified by recipient's addresses and ages) and question requires  
10 additional time and cost.

As described above, there is required an innovative system and method, which can simplify the response process and more effectively process the response data. Further, there is required an alternative to induce the recipient to positively respond to the message.

## 15           **Disclosure of the Invention**

Therefore, the present invention has been made in view of the above problems, and it is an object of the present invention to provide a system, a method and a computer-readable recording medium for collecting decisions of recipients using an electronic message having a response function, which transmit an electronic message  
20 including questions to a plurality of recipients, receive response data automatically generated by expressing opinions of the recipients, and statistically analyze the received data.

It is another object of the present invention to provide a system, a method and  
25 a computer-readable recording medium for more efficiently collecting decisions of recipients using an electronic message by randomly selecting persons to receive free

gifts from the recipients and revealing the selected results to the recipients only after the recipient responds to every question of the message.

In accordance with one aspect of the present invention, the above and other objects can be accomplished by the provision of a method for collecting decisions of recipients using an electronic message through an on-line communication network, the method comprising the steps of generating an electronic message including at least one question, transmitting the electronic message to terminals of recipients, inputting his/her decision to each question on the transmitted message, generating response data distinguishable by the questions and the recipients, the response data formed from recipient's opinions inputted on the message, and automatically returning the response data to a sender, statistically processing the returned response data according to the questions and the recipients, and outputting results of the processed response data.

Preferably, the electronic message may comprise a plurality of response items according to response type to every question. The step of inputting his/her decision to each question may be a step of selecting one response item corresponding to his/her decision from the response items. In this case, the generated response data may comprise a response code corresponding to the selected response item.

Further, preferably, the step of selecting one response item is carried out by pressing an input button of a recipient's terminal corresponding to the selected response item or by clicking a button corresponding to the selected response item displayed on the message using a mouse.

The recipient's opinion may be inputted by providing a separate window by selecting the button and by writing the recipient's opinion on the window in text. Alternatively, the recipient's opinion may be inputted by providing a button for inputting an opinion of the recipient on the electronic message and being connected to a web page provided with a notion column by operating a web-browser of the recipient's terminal by selecting the button, and by writing the recipient's opinion on the notion

column of the web page. Herein, the generated response data comprises the inputted text.

The data trends of plural recipients may be analyzed by processing the response codes according to the selected response item to each question and by  
5 summing up numbers of the corresponding response items. Herein, the response items and the sum of the numbers are outputted.

In accordance with another embodiment of this aspect of the present invention, when the electronic message is generated, at least one person to receive a designated free gift is selected from the recipients and the selected result under closed condition is  
10 coupled with the electronic message of each recipient. The closed result is revealed after the recipient inputs his/her opinion to the question, thereby improving reply rate of the recipients.

Preferably, the response data may further comprise at least one selected from the group consisting of a transmitting time of the electronic message, a reading time of  
15 the electronic message by the recipient, a returning time of the electronic message and an identifier for identifying the recipient.

In accordance with another aspect of the present invention, there is provided a system for collecting decisions of recipients using an electronic message through an on-line communication network. The system comprises a message generator for  
20 generating the electronic message, the generator serving to automatically generate response data including at least one question, identification codes classified according to the question and the recipient, and opinions inputted by the recipients, and serving to automatically return the response data to the system, a data base section for storing a recipient list and the returned response data, a data processor for classifying and  
25 statistically analyzing the response data stored in the data base section according to the question and the identification code of the recipient, and an output section for outputting the response data stored in the data base section or the analyzed results of the data processor.

In accordance with yet another aspect of the present invention, there is provided a computer-readable recording medium in a system for collecting decisions of recipients using an electronic message through an on-line communication network. The computer-readable recording medium stores a program for performing means for  
5 operating an electronic message including at least one question, means for transmitting the electronic message to a plurality of recipient's terminals, means for automatically generating response data distinguishable by the question and the recipient, the response data formed from recipient's opinions inputted on the message, means for automatically returning the response data to a sender, means for statistically analyzing the returned  
10 response data according to the question and the recipient, and means for outputting the statistically analyzed results.

### **Brief Description of the Drawings**

The above and other objects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken  
15 in conjunction with the accompanying drawings, in which:

Fig. 1 is a schematic view illustrating a system for collecting decisions of recipients in accordance with an embodiment of the present invention;

Figs. 2a and 2b are flow charts of a method for collecting decisions of recipients using an electronic message in accordance with an embodiment of the  
20 present invention;

Fig. 3 is a flow chart of a process of generating/transmitting the electronic message from the decision collecting method in accordance with an embodiment of the present invention;

Figs. 4a and 4b show examples of the electronic message including a question  
25 generated by the present invention;

Fig. 5 is an example of a response information data format employed by the

present invention;

Fig. 6 is a flow chart of a process of statistically analyzing response data returned from the recipients in accordance with an embodiment of the present invention;

5 Fig. 7 is an example of a screen outputting analyzed results of the response data by the recipients to the message having a response function of Fig. 4;

Fig. 8 is an example of a screen expressing opinions of the recipients of the present invention:

10 Figs. 9a and 9b are flow charts of a method for collecting decisions of recipients using an electronic message in accordance with another embodiment of the present invention; and

Fig. 10 is a schematic view of a communication network applying the system of the present invention.

### **Best Mode for Carrying Out the Invention**

15 Fig. 1 is a schematic view illustrating a system for collecting decisions of recipients in accordance with an embodiment of the present invention.

With reference to Fig. 1, the decision collecting system 100 of the present invention comprises a response functional message generating and transmitting unit 110 and a returned response data collecting and processing unit 130. The response  
20 functional message generating and transmitting unit 110 comprises a message generator 112 for generating an electronic message 10 with a response function, and a first data base section 114 for storing data necessary to generate and transmit the message, i.e., a recipient's list including recipient's names, recipient's e-mail addresses, recipient's mobile communication terminal numbers, etc. The returned response data collecting  
25 and processing unit 130 comprises a data processor 132 for statistically processing returned response data 20 so as to be properly classified, a second data base section 134

for storing the processed data along with the returned response data, and an output section 136 for outputting the stored data of the first and the second data base sections 114, 134. Herein, the data base section of the present invention is divided into the first data base section 114 and the second data base section 134, but if necessary, the first data base section 114 and the second data base section 134 may be integrated into one section, and the message generated by the message generating and transmitting unit 110 may be also stored in the second data base section 134.

First, the electronic message 10 with a response function is generated at a user's request. At this time, the user is connected to the aforementioned decision collecting system 100. The electronic message 10 is created by the message generator 112. This message generating step is described in more detail, as follows.

The user, who is connected to the decision collecting system 100, draws up a questionnaire having a plurality of questions, and then adds plural response items to each question according to response type, such as yes/no, or Nos. 1, 2, 3, and 4, or a notion column for writing a recipient's opinion in text, thereby generating the electronic message 10.

The recipient's response is performed by selecting one from the response items or by writing his/her opinion on the notion column. The recipient's response data message comprises identification codes of the questions and identification codes of the response items so that the response data of the recipients are distinguished according to the questions and the response items, or are accompanied by the text file of the notion column, on which the recipient's opinion is written. Then, these response data are automatically returned to the decision collecting system 100.

Then, the decision collecting system 100 receives the returned response data 20. The data processor 132 of the returned response data collecting and processing unit 130 statistically analyzes the returned response data 20 according to the identification codes. The statistically analyzed results and the returned response data are stored in the second data base section 134. The output section 136 outputs the

stored results at a user's request.

For example, the data trends of the total recipients may be analyzed by statistically processing the number of selected response items according to each question. Further, in case of using the recipient's identification code, the data trend of a certain recipient may be analyzed by his/her response to each question or by his/her opinion written on the notion column.

Further, the present invention provides a method for collecting decisions of recipients using an electronic message. Figs. 2a and 2b are flow charts of the decision collecting method using an electronic message in accordance with an embodiment of the present invention.

With reference to Figs. 2a and 2b, a user is connected to a server for implementing the decision collecting method of the present invention by a mobile communication terminal or a personal computer (step 201). Then, the user generates an electronic message with a response function (step 203). The message includes designated questions, and a plurality of response items, and/or a notion column so that a recipient can express his/her decision to each question. The user anticipates the response type of the recipients and pre-determines the aforementioned response items (for example, yes/no or Nos. 1, 2, 3 and 4) according to the response type. Therefore, the recipient may express his/her decision by selecting one corresponding to his/her decision from the response items. After generating the message, the message is transmitted to each recipient (step 205). The recipient reads the message (step 207) and decides whether to respond to the message or not (step 209). If the recipient wants to respond to each question of the message, he/she may input his/her opinion on the notion column of the message (step 211). When the recipient inputs his/her opinion to the questions on the notion column (step 213) and selects a transmission button (step 215), a response data including the opinion message is automatically generated (step 225). Alternatively, when the recipient clicks a button corresponding to the notion column, a

web browser may be operated. Thereby, the recipient may input his/her opinion directly to the server of the system.

However, if the recipient does not want to use the notion column, he/she may only select one from the response items to each question (step 221). When the recipient  
5 selects one item representing his/her decision, a response code corresponding to the selected response item is automatically created (step 223). The response code may be combined with the opinion message (step 225), thereby creating one response data and transmitting this response data, or if the opinion message does not exist, the response code itself may be transmitted (step 227).

10 If the recipient does not want to respond to the questions, he/she may select a cancel button (step 217), thereby positively expressing his/her rejection, or may delete the message without any response. When the recipient selects the cancel button, a cancel code is automatically created (step 219).

As shown in Fig. 2a, the opinion message may be combined with the selected  
15 simple response code and then formed as one response data. This response data is then returned to the system. Differing from Fig. 2a, a response data including only the simple response code may be also returned to the system.

After receiving the recipient's response data, the decision collecting system stores the response data including the response codes and the opinion messages (step  
20 229), then statistically processes these response data according to the recipients or the questions (step 231). The processed data results are also stored in the decision collecting system together with the response data and may be outputted into a monitor, etc. at a user's request (step 233).

25 Fig. 3 is a flow chart of a process of generating/transmitting the electronic message by the decision collecting method in accordance with an embodiment of the present invention.

With reference to Fig. 3, the process of generating/transmitting the electronic

message is described in more detail.

The user is connected to the decision collecting system of the present invention (step 301) and draws up the contents of the message including questions to be transmitted to the recipients (step 303). These steps are identical with a conventional message contents inputting step. For example, a question of "How about presenting a product ABC to Gil-dong as his birthday gift?" is drawn up (Fig. 4a).

Then, if any, the message may additionally comprise other data (step 307). For example, the message may comprise data related to the aforementioned question. That is, a graphic image file of the product ABC may be enclosed with the message so as to help the recipient to decide to respond to the question (Fig. 4a). Otherwise, regardless of the question, an advertisement file of a sponsor, which provides this service, may be enclosed (Fig. 4b).

If data to be enclosed do not exist or the enclosure of the data is completed, a response input method is selected (step 309). Herein, response input methods comprise a key entry method, in which a response is inputted by pushing a designated key according to the response items, and a button click method, in which a response is inputted by clicking a corresponding icon using a mouse. Preferably, these input methods may be properly selected according to the recipient's terminal. If the message is transmitted to a recipient's terminal, which is capable of creating a document, a method of providing the notion column for writing a recipient's decision on the message may be further selected.

After selecting the response input method, the number of the response items is selected and the contents of each response item are drawn up. Thereby, a plurality of the response items are created (step 311). An identification code is given to each response item. The response data is created so that the code is returned to the sender by a recipient's selection. After creating the message, a recipient's e-mail address or a number of a recipient's mobile communication terminal is inputted (step 313), and the message is transmitted to a corresponding recipient (step 315). After transmitting the

message, a window for asking whether any other recipient still remains or not is provided on the user's monitor (step. 317). If any, the user returned to the step of inputting a recipient's e-mail address or a number of a recipient's mobile communication terminal (step 313) and this cycle is repeated until the message is  
5 transmitted to all recipients.

However, differing from the aforementioned flow chart, the message of the present invention may be collectively batch-transmitted into a great number of recipients by using the pre-inputted and stored data including recipient's e-mail addresses or recipient's terminal numbers.

10

After completing the transmission of the message to every recipient, the data of the recipients are inputted, thereby simply processing the input of the recipient's addresses and numbers in a subsequent transmitting step. Further, the message is also stored so that the response data returned from the recipients may be classified  
15 according to stated items of the message, i.e., senders, questions and response items (step 319).

Figs. 4a and 4b are examples of the electronic message 401 including questions generated by the present invention. Hereinafter, the electronic message 401 is described in detail, referring to Figs. 3 and 4a.

20 The electronic message 401 includes a question 405 in relation to a birthday present and an accompanying graphical image file of a computer 407 to be selected as the birthday present. Since the message is transmitted via e-mail, the button click method using a mouse is selected as the response input method. Further, the number of the response items to the questions is 2 and the contents of the response items are  
25 "yes" and "no". Throughout this process, as shown in Fig. 4a, the message 401 including buttons 417 corresponding to each response item to the question, such as yes, no, other opinion and cancel, is generated.

Herein, the button for "other opinion" is a button for generating a notion

column for writing a recipient's decision in more detail. Even though not shown, if the recipient clicks the other opinion button, the notion column created in a separate window is further generated so that the recipient specifically writes his/her decision on the notion column. After completing the writing of the decision, the recipient clicks a  
5 transmission button formed on one edge of the notion column, thereby creating an opinion message file in text.

Alternatively, if the recipient clicks the other opinion button, the web browser may be operated. Thereby, the recipient may input his/her opinion directly to the website of the system of the present invention.

10 Examples of the electronic message generated by the aforementioned process are shown in Figs. 4a and 4b. Simultaneously with selecting one from the response items to each question, the response code of the corresponding response item may be automatically returned to the system. In case of using the notion column for writing the recipient's opinion, the response code may be coupled with the opinion message  
15 created by a text file and the coupled data may be automatically returned to the system. Otherwise, in case of using the notion column, the web browser is automatically operated to provide the website of the system. Then, the recipient may directly write his/her opinion on the website of the system.

Fig. 4b shows another example of the electronic message 451 including an  
20 advertisement 455 by a sponsor as an accompanying file.

As described above, the response data of the recipients and the returning methods of the response data may be various. Fig. 5 is an example of a response information data format employed by the present invention.

The response data comprises a sender data field 513 including a sender's e-  
25 mail address or a sender's terminal number, a recipient data field 515 including a recipient's e-mail address or a recipient's terminal number, and a response code of the selected simple response item. In case of inputting a message into the notion column, the response data further comprises recipient input message data fields 519, 521, and

523. If necessary, the response data may further comprise a transmitting time 507 when the message with a response function is transmitted into the recipient, a receiving time 509 when the recipient reads the message, and a returning time 511 when the response data of the recipient is returned.

5        A data start section and a data termination section of the response data are represented by a start code 501 and an end code 505, respectively. Each data field is divided by a division code 503. The recipient input message may comprise at least one field corresponding to the length of the input message. In case of comprising plural fields, the division code 503 is not formed between the same input message data  
10    fields. By dividing the response data into several fields, the system can separate the corresponding data from each field and statistically process the separated data.

Further, since the start code 501 has a function of classifying the response data according to the message, the system can classify many response data to plural electronic messages according to electronic message.

15

Fig. 6 is a flow chart of a process of statistically analyzing response data returned from the recipients in accordance with an embodiment of the present invention.

When the recipient inputs his/her decision (by selecting a response item or by  
20    writing his/her opinion on the notion column) on the message with the response function, the response data of Fig. 5 is automatically generated and the generated data is returned to the system. Then, a statistical analysis step starts (step 601).

First, the system automatically checks whether there are any returned response data or not (step 603). If any returned response data exists, the start code of the  
25    response data is confirmed (step 605) so as to discriminate the response data to the transmitted electronic message from other response data to different electronic messages. Therefore, after distinguishing the response data responding to the same electronic message from other response data to the different electronic messages, the

data of each data field are classified (step 607). That is, the simple response codes of the response data are classified according to the transmitting time, the receiving time, the returning time, the recipients, and the questions. Further, in the case of the inputted opinion message, this opinion messages are also classified.

5           After classifying the data of each field, if the end code is confirmed, every data classification step is terminated (step 609). Then, the classified data are processed (step 611). For example, the number of the selected response items to each question is statistically analyzed, or the recipient's opinions written on the notion column are sorted according to the recipient. Then, the statistically analyzed results or the  
10           classified data according to each subject, such as the recipient, the returning time, etc. are stored in the data base (step 613), thereby enabling outputting of the stored results or data at a user's request.

Fig. 7 is an example of a screen 601 outputting analyzed results of the response  
15           data to the message having a response function of Fig. 4.

With reference to Fig. 7, a question 603 of the message to be transmitted to the recipients, a transmitting date 605 of the message, and a number 605 of the recipients are displayed. Statistically analyzed results, i.e., a response distribution table 609 including yes, no, other opinion and cancel, and the number of the responses 611 are  
20           provided on the tail of the message. Further, a text opinion reading button 613 is provided. The user can read the detailed statements of other opinions by selecting the text opinion reading button 613.

Fig. 8 is an example of a screen 801 expressing opinions of the recipients and  
25           formed by clicking the opinion reading button. With reference to Fig. 8, the number 805 of the recipients, who present other opinions, is displayed. The name 809 of the recipient, who presents a text opinion, is also provided on the bottom of the screen 801. Further, a receiving time 811 and a detailed statement 913 of an opinion inputted by the

recipient are also provided.

As described above, according to the present invention, a designated questionnaire using a message with a response function is transmitted to the recipient and the recipient reads this message and expresses his/her decision on the message by a simple input method such as a button click. Then, the response data are automatically generated and returned to the system, thereby easily collecting decisions of the recipients.

The decision collecting system and the decision collecting method according to the present invention are more effectively used by adding other steps or components. Even though the aforementioned decision collecting system and method of the present invention are used, if a recipient receives a large quantity of messages every day, the recipient may be reluctant to read the message and input his/her decision. Particularly, since a survey for conducting marketing research by a certain enterprise includes a large number of questions and is rarely of concern to the recipients, the recipients are more reluctant to respond to this survey.

In order to solve this problem, another preferred embodiment of the present invention is provided. By using this preferred embodiment of the present invention, reply rate of the recipients to the electronic message may be improved.

In accordance with this preferred embodiment of the present invention, a step of randomly selecting persons to obtain a free gift from the recipients and transmitting the message including the selected results in an implied code form is added. The selected result, that is, whether the recipient obtains the free gift or not, is contained in implied data so as to be revealed only if the recipient responds to all the questions. By informing the recipient of the fact that the message comprises the free gift obtaining data and the data are revealed to the recipient after responding to all the questions, it will be expected that the recipient more positively responds to the message to confirm whether he/she obtains the free gift or not. Thereby, the replay efficiency to the

message of the present invention can be further improved.

Figs. 9a and 9b are flow charts of a method for collecting decisions of recipients using an electronic message in accordance with another embodiment of the present invention. With reference to Figs. 9a and 9b, the decision collecting method of another preferred embodiment of the present invention is described in detail hereinafter.

The decision collecting method of this embodiment of the present invention also comprises the steps of generating and transmitting a message with a response function and of receiving and processing returned response data to the questions of the message. However, the decision collecting method of this embodiment further comprises a step of randomly selecting one to obtain a free gift from the recipients, of transmitting a message including this selected result in an implied code form, and of informing the recipient of the transmitted result only if the recipient responds to the message.

With reference to Fig. 9a, a user is connected to a system of this embodiment (step 901). Then, the user generates an electronic message including questions and response items (step 903). If the user wants to sponsor an event offering free gifts (step 905), additional steps are carried out. If not (step 905), the generated message in the step 903 is immediately transmitted to the recipients (step 913).

If the user wants to sponsor the free gift offering event, the user draws up the contents of the event (step 907). That is, the user determines the articles and the number of the gifts, and inputs the date and place of offering the gift.

Then, the user randomly selects persons to receive the offered gift (step 909) from the recipients. Of course, the number of the persons to receive the offered gift coincides with the number of the offered gifts. The randomly selected results are not revealed to the recipient and are stored in the data base of the system. The stored results are used as data informing the recipient of whether he/she receives the gifts or

not.

The selected result of each recipient, the recipient's e-mail address and the recipient's mobile communication terminal number are coupled with the message with the response function (step 911). Herein, the result of the free gift award coupled with the message is not revealed to the public and is coded, and then the coded result is provided so that this code is automatically revealed to the recipient only if the recipient responds to every questions. Then, the message coupled with the event result is transmitted to each recipient (step 913).

As shown in Fig. 9b, the recipient reads the transmitted message (step 915), and responds to the questions of the message (step 917). The message including the data of the free gift offering event further comprises a paragraph informing the recipients that the result of the free gift offering event is revealed only after responding to every questions of the message, thereby inducing the recipient to more positively respond to the message.

While responding to the message, in case of plural questions, when the recipient does not respond to all the questions (step 919), this fact that the recipient does not respond to all the questions is displayed (step 921). Thereby, the recipient can respond to all the questions. After responding to all the questions, the message is decoded (step 923), and the decoded result is displayed on a separate window (step 925). Herein, decoding and displaying the result may be easily achieved using a decoding program such as Active X, etc.

The system and method of this embodiment in Figs. 9a and 9b induces the recipients to more positively respond to the message by stimulating his/her interest to the event. Therefore, this system and method can be effectively used to transmit a message with a lot of questions, i.e., a survey, or a message from an enterprise of little concern to the recipients.

Fig. 10 is a schematic view of a communication network applying the system

of the present invention. With reference to Fig. 10, the communication network comprises a decision collecting system 1120 including a server 1127 with a data base section 1129, a mobile communication terminal 1100a connectable to the decision collecting system 1120 via the Internet or the Intranet, and personal computers 1100b, 1100c. The mobile communication terminal 1100a is connected to a switching system 1150 via a base station 1130 and then connected to the decision collecting system 1120 of the present invention via a server 1170 for offering the Internet service. In case of using a personal computer, the personal computer is connected to the decision collecting system 1120 of the present invention by a dedicated line connection method or a ISP (Internet Service Provider) server connection method.

As described above, in order to be connected to the decision collecting system 1120, the user uses means such as the mobile communication terminal 1100a or the personal computers 1100b, 1100c. Further, the decision collecting system 1120 can transmit a message with a response function to the recipients via the mobile communication terminal 1100a or the personal computers 1100b, 1100c.

The present invention provides a system, a method and a computer-readable recording medium for collecting decisions of recipients using an electronic message having a response function, which transmit an electronic message including questions to a plurality of recipients, receive response data automatically generated by expressing his/her opinions from the recipients, and statistically analyze the received data.

Further, the present invention improves reply rates by randomly selecting persons to obtain free gifts from the recipients and revealing the selected results to the recipients only after the recipients respond to every question of the message.

## Industrial Applicability

As apparent from the above description, the system, the method and the

computer-readable recording medium for collecting decisions of recipients using an electronic message having a response function according to the present invention may be used as a public opinion survey and a survey for marketing research by government offices and enterprises, or an invitation message for checking the number of participants of a certain meeting.

Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.

**Claims:**

1. A method for collecting decisions of recipients using an electronic message through an on-line communication network, said method comprising the steps of:

generating an electronic message including at least one question;

5 transmitting said electronic message to terminals of recipients;

inputting his/her decision to each question on the transmitted message by the recipients;

generating response data distinguishable by the questions and the recipients, said response data formed from recipient's opinions inputted on the message, and

10 automatically returning the response data to a sender;

statistically processing the returned response data according to the questions and the recipients; and

outputting results of the processed response data.

15 2. The decision collecting method as set forth in claim 1, wherein said electronic message comprises a plurality of response items according to response type to every question, wherein said step of inputting his/her decision to each question by the recipients is a step of selecting one response item corresponding to his/her decision from said response items, and said generated response data comprises a response code  
20 corresponding to said selected response item.

3. The decision collecting method as set forth in claim 2, wherein said step of selecting one response item is carried out by pressing an input button of a recipient's terminal corresponding to said selected response item.

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4. The decision collecting method as set forth in claim 2, wherein said step of selecting one response item is carried out by clicking a button corresponding to said

selected response item and displayed on the message with a mouse.

5. The decision collecting method as set forth in claim 1, wherein said step of inputting his/her decision to each question by the recipients comprises the sub-steps of:

- 5        selecting a button for inputting an opinion of the recipient on the electronic message, thereby providing a separate window for inputting the recipient's opinion; and  
writing the recipient's opinion on the window in text, and  
wherein said generated response data comprises said inputted text.

- 10       6. The decision collecting method as set forth in claim 1, wherein said step of inputting his/her decision to each question by the recipients comprises the sub-steps of:

- selecting a button for inputting an opinion of the recipient on the electronic message, thereby operating a web-browser of said recipient's terminal and being connected to a web page provided with a notion column; and  
15       writing the recipient's opinion on the notion column of the web page, and  
wherein said generated response data comprises said inputted text.

7. The decision collecting method as set forth in claim 2, wherein said step of statistically processing the returned response data is a step of analyzing said response  
20       codes according to said selected response item to each question and of summing up numbers of the corresponding response items respectively.

8. The decision collecting method as set forth in claim 7, wherein said step of outputting results of the processed response data is a step of outputting the response  
25       items and the sums of the numbers.

9. The decision collecting method as set forth in claim 7, wherein said step of outputting results of the processed response data is a step of providing the response

items, the sums of the numbers, and the text of the recipient's inputted opinion to a user's audio communication terminal or a display of a user's computer terminal.

10. The decision collecting method as set forth in claim 1, wherein said  
5 electronic message is formed in an electronic mail to be readable by a mobile communication terminal or a computer terminal.

11. The decision collecting method as set forth in claim 1, wherein said step of generating the electronic message comprises the sub-steps of:  
10 randomly selecting at least one person to receive a designated free gift from the recipients; and  
combining said selected result under a closed condition with said electronic message of each recipient; and  
wherein the closed result is revealed after the recipient inputs his/her opinion  
15 to the question.

12. The decision collecting method as set forth in claim 1, wherein said response data further comprises at least one selected from the group consisting of a transmitting time of said electronic message, a reading time of said electronic message  
20 by the recipient, a returning time of said electronic message and an identifier for identifying the recipient.

13. A system for collecting decisions of recipients using an electronic message through an on-line communication network, said system comprising:  
25 a message generator for generating the electronic message, said generator serving to automatically generate response data including at least one question, identification codes classified according to the question and the recipient, and opinions inputted by the recipients and serving to automatically return said response data to the

system;

a data base section for storing a recipient list and the returned response data;

a data processor for classifying and statistically analyzing the response data stored in the data base section according to the question and the identification code of the recipient; and

an output section for outputting the response data stored in the data base section or the analyzed results of the data processor.

14. A computer-readable recording medium in a system for collecting decisions of recipients using an electronic message through an on-line communication network, said medium storing a program for operating:

means for generating an electronic message including at least one question;

means for transmitting said electronic message to a plurality of recipient's terminals;

means for automatically generating response data distinguishable by the question and the recipient, said response data formed from recipient's opinions inputted on the message;

means for automatically returning said response data to a sender;

means for statistically analyzing the returned response data according to the question and the recipient; and

means for outputting the statistically analyzed results.

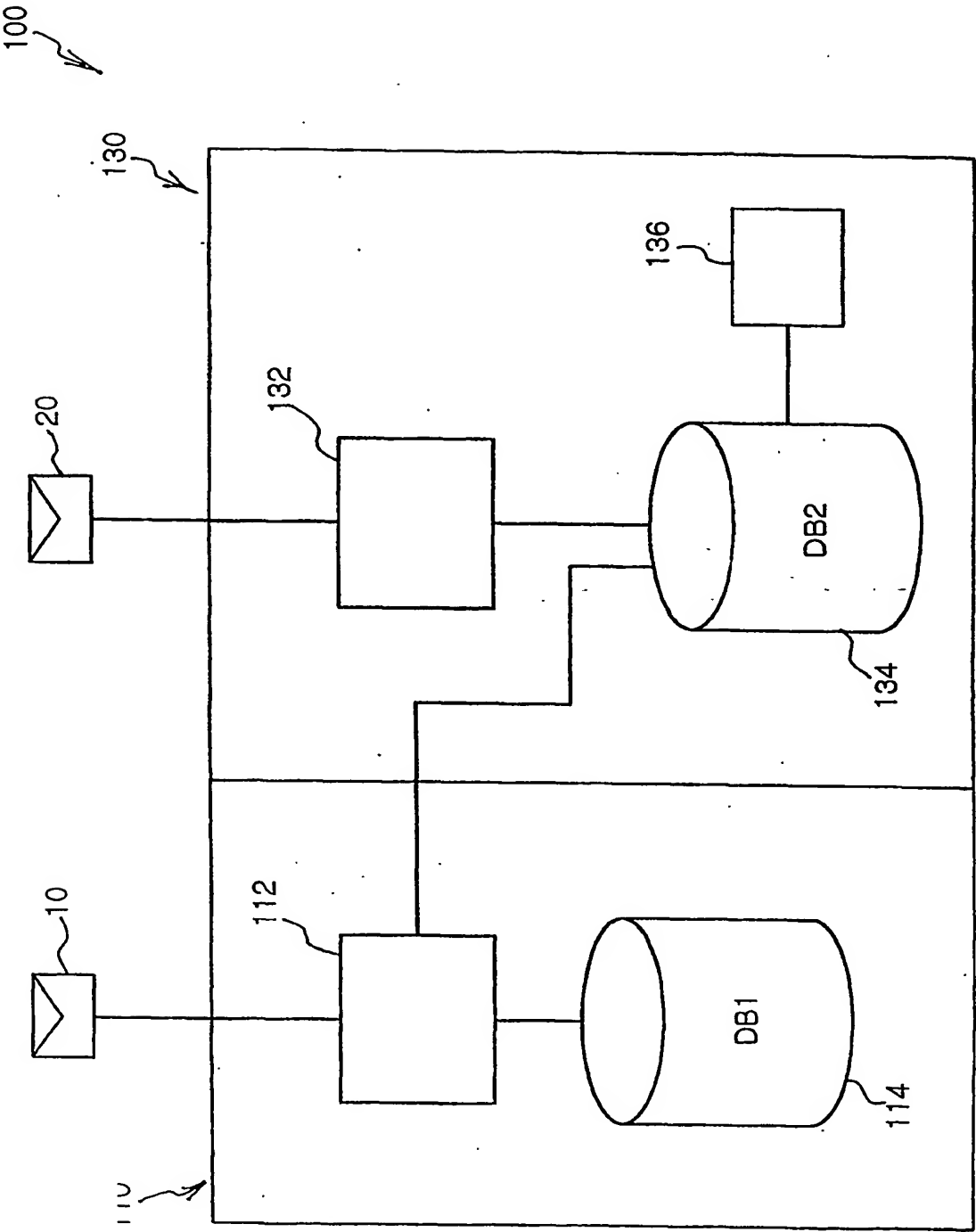


FIG. 1

2/13

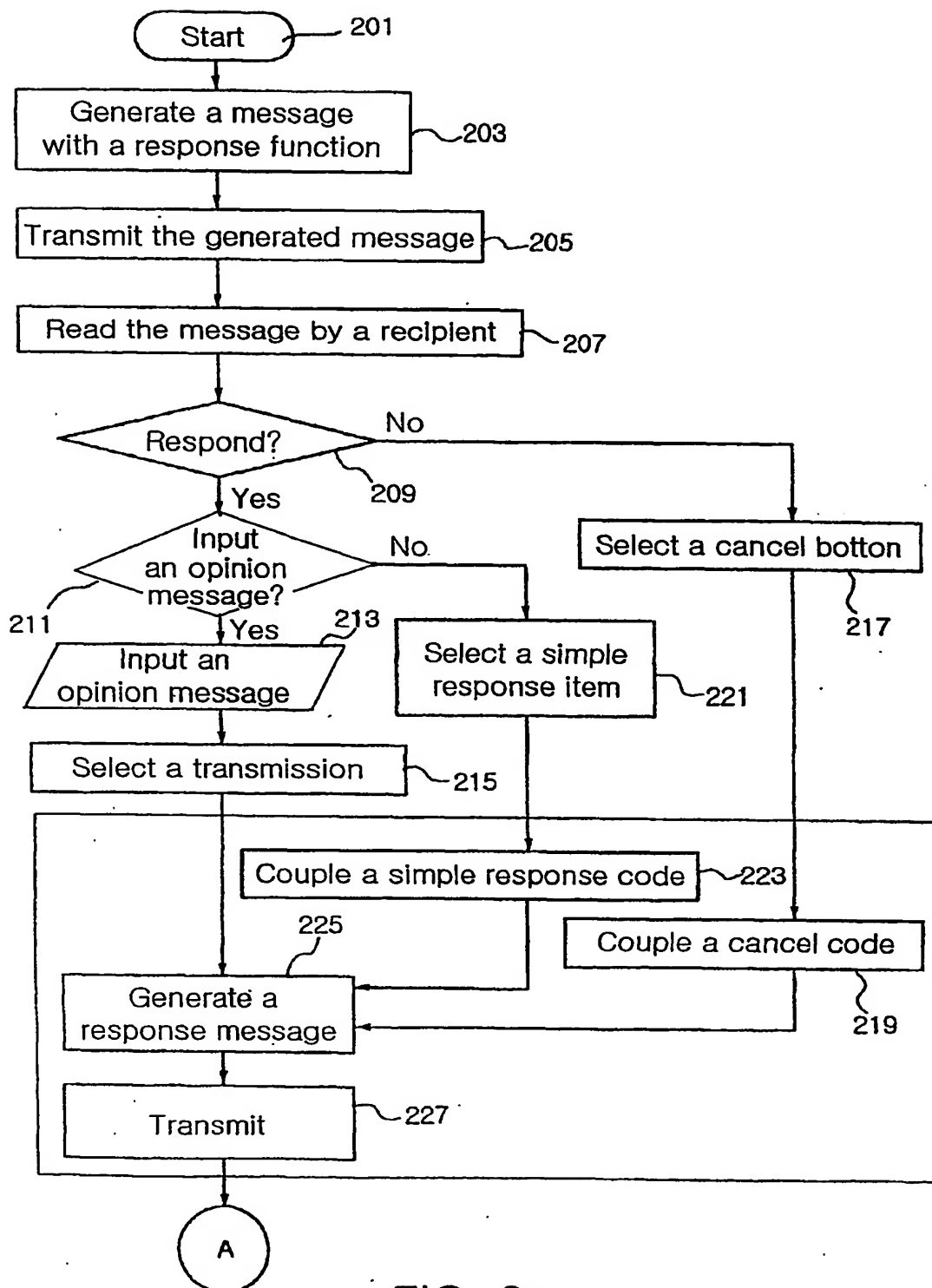


FIG. 2a

3/13

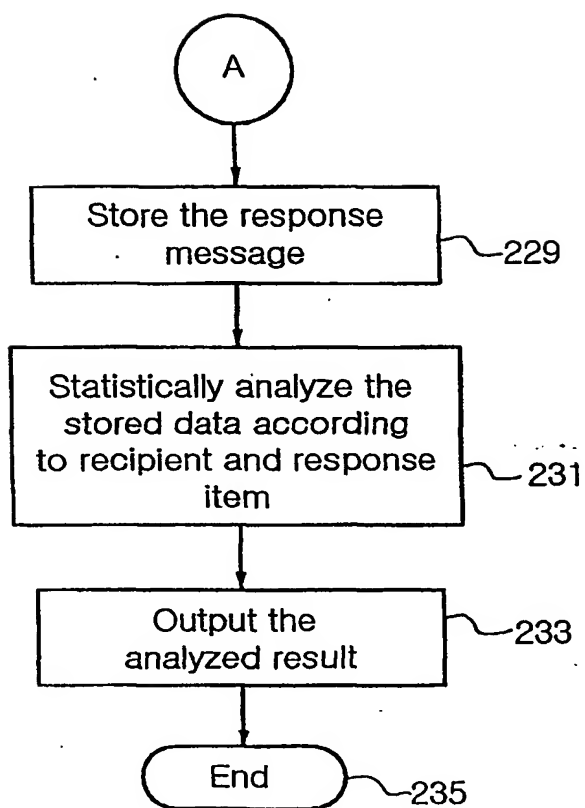


FIG. 2b

4/13

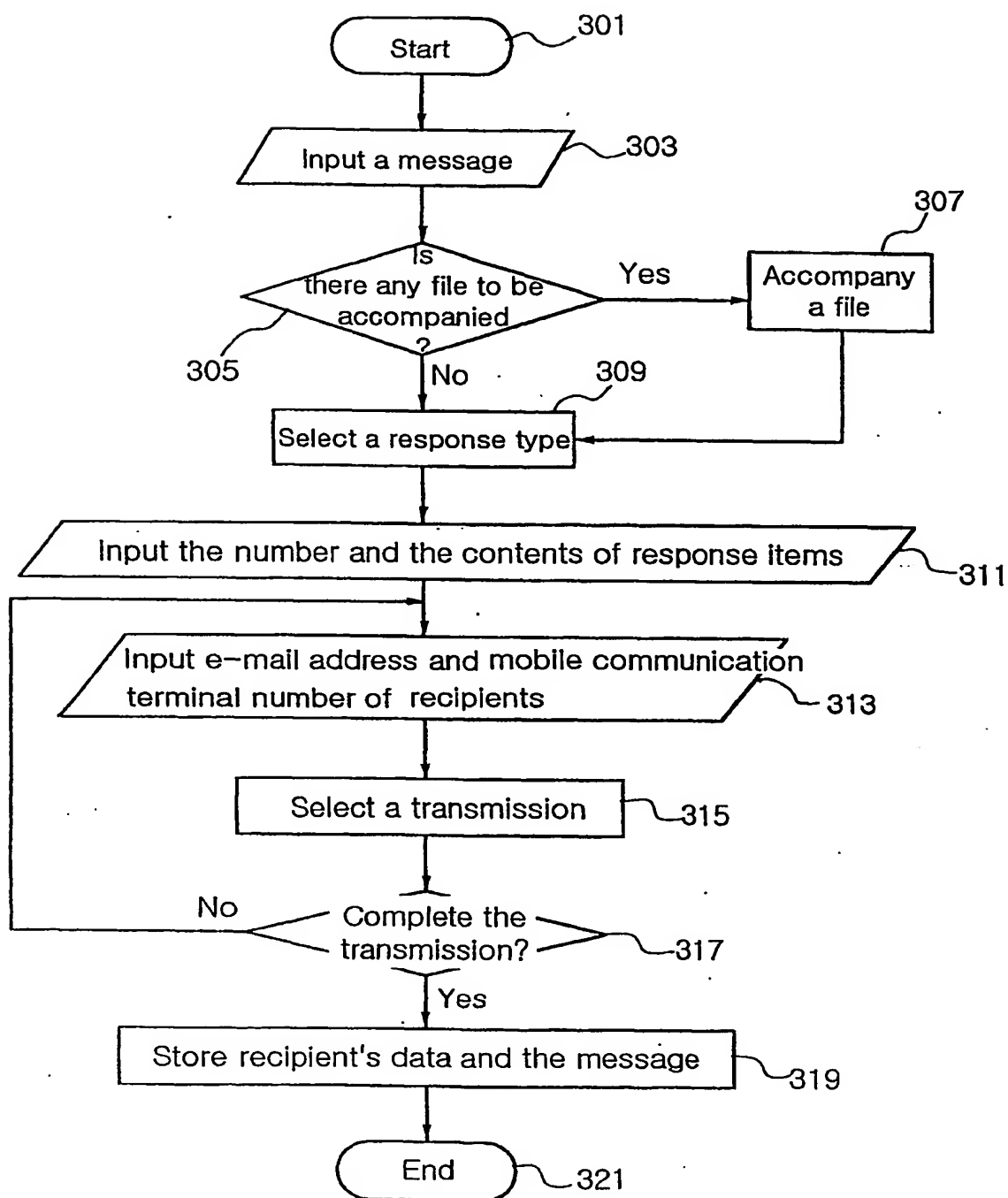


FIG. 3

5/13

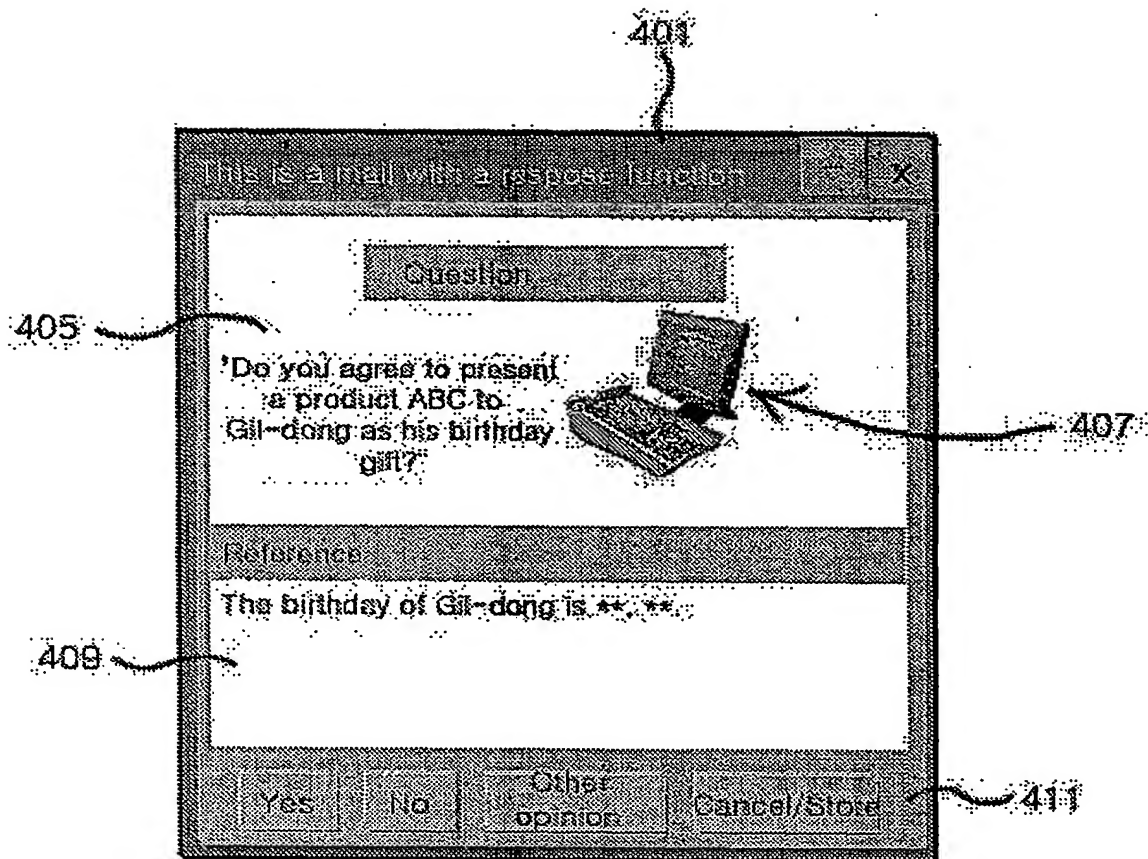


FIG. 4a

6/13

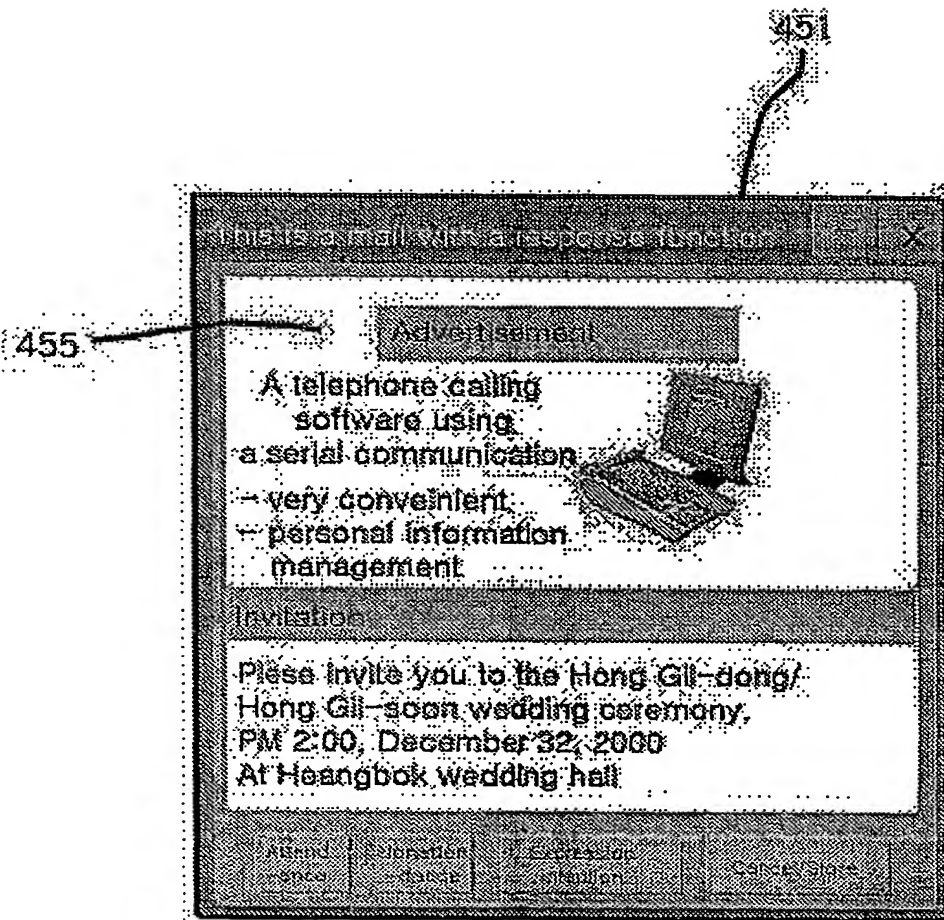


FIG. 4b

7/13

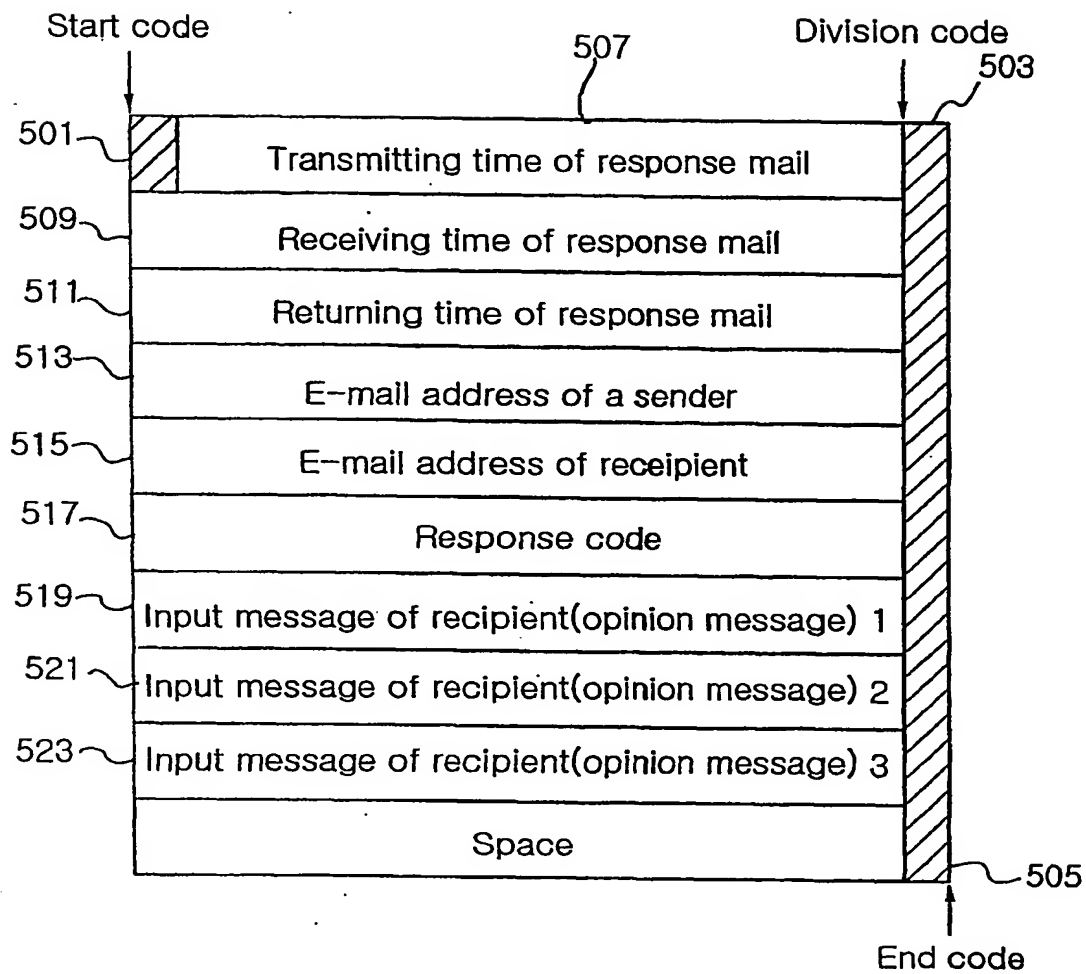


FIG. 5

8/13

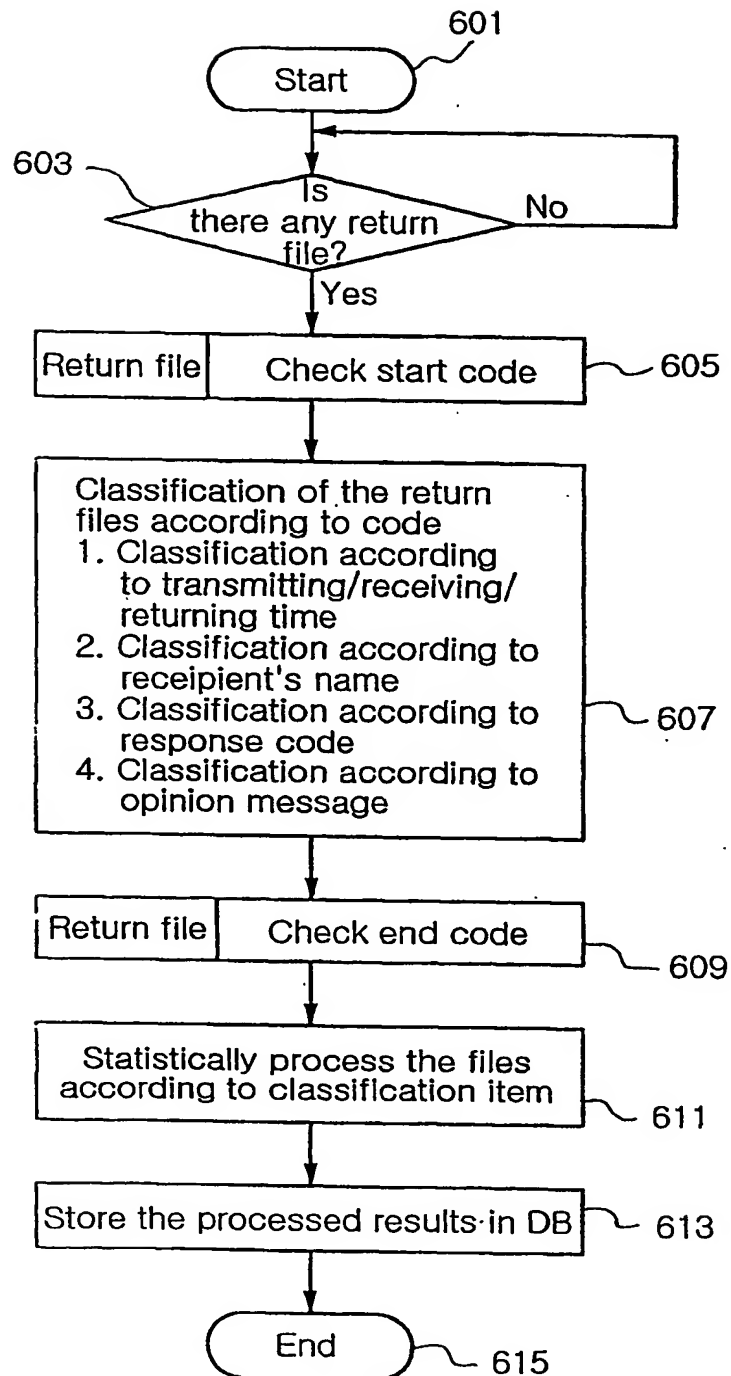


FIG. 6

9/13

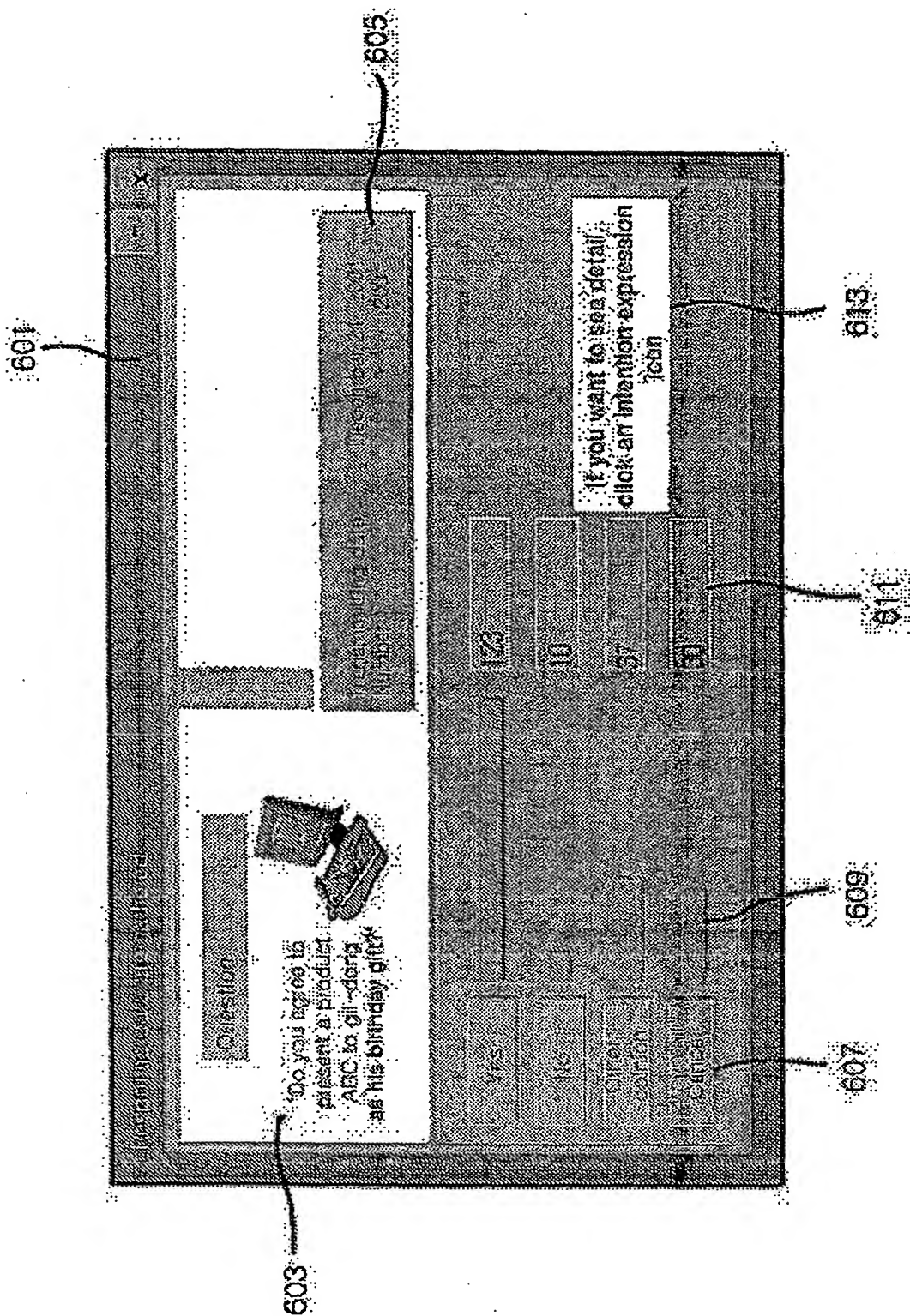


FIG. 7

10/13

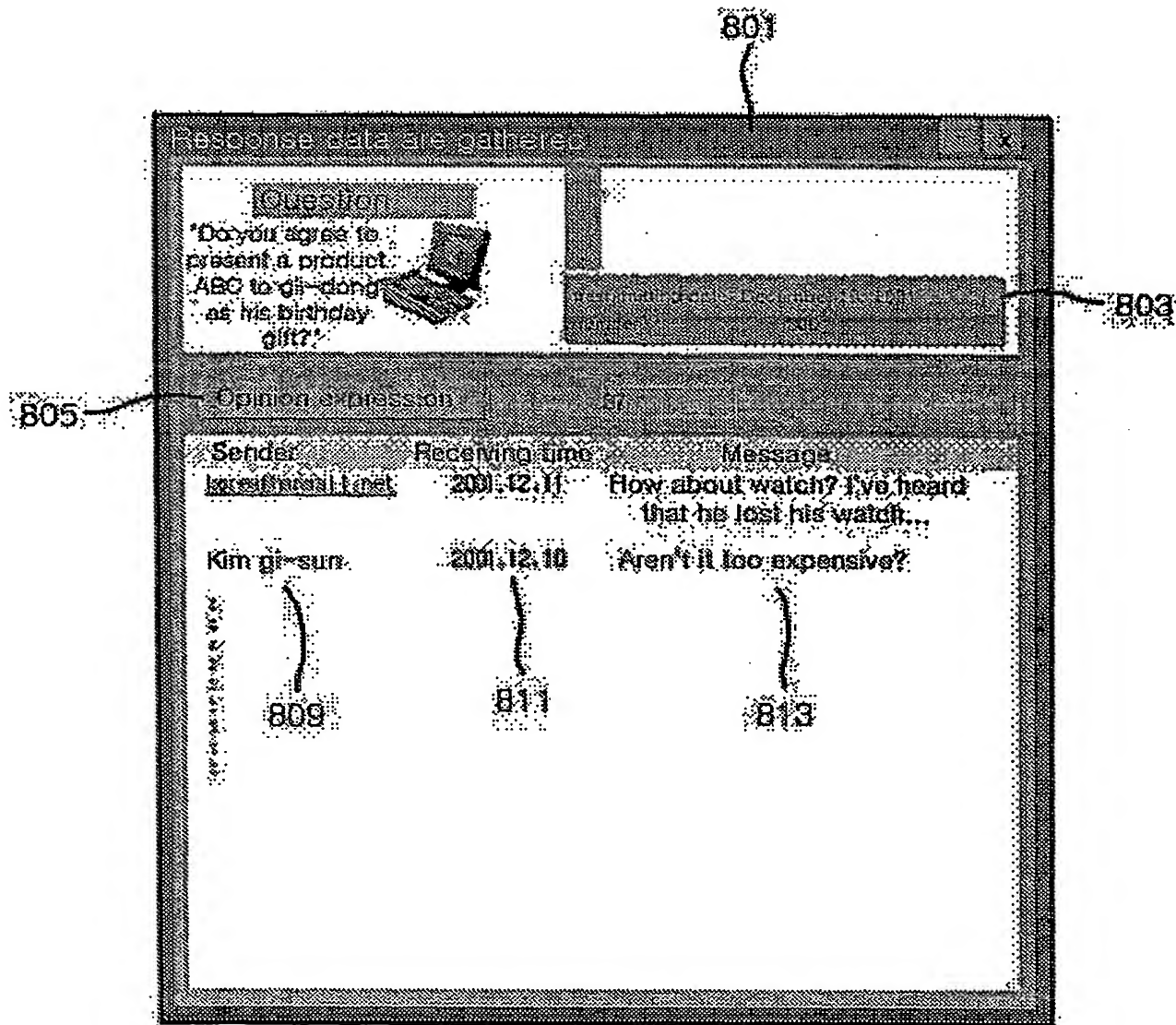


FIG. 8

11/13

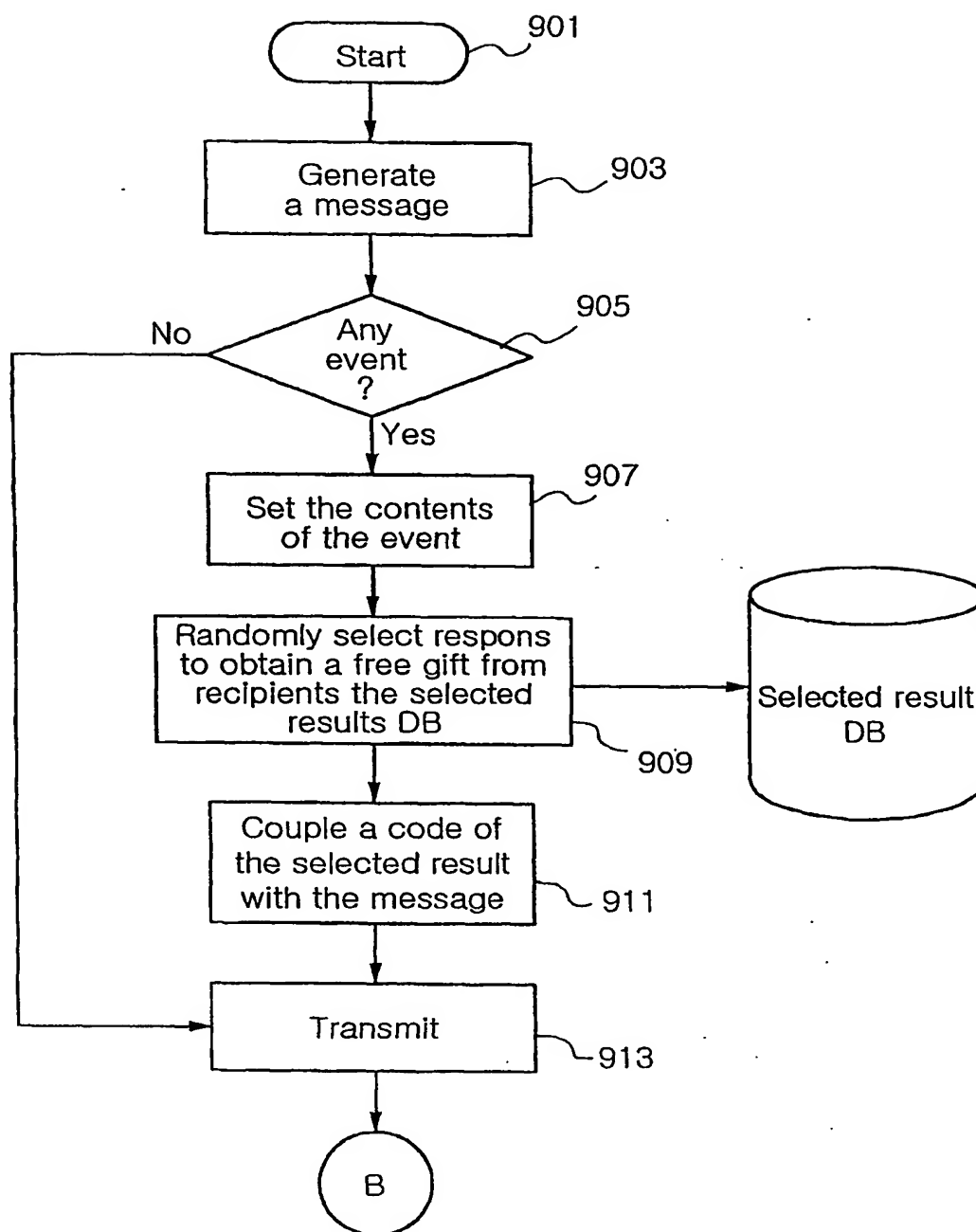


FIG. 9a

12/13

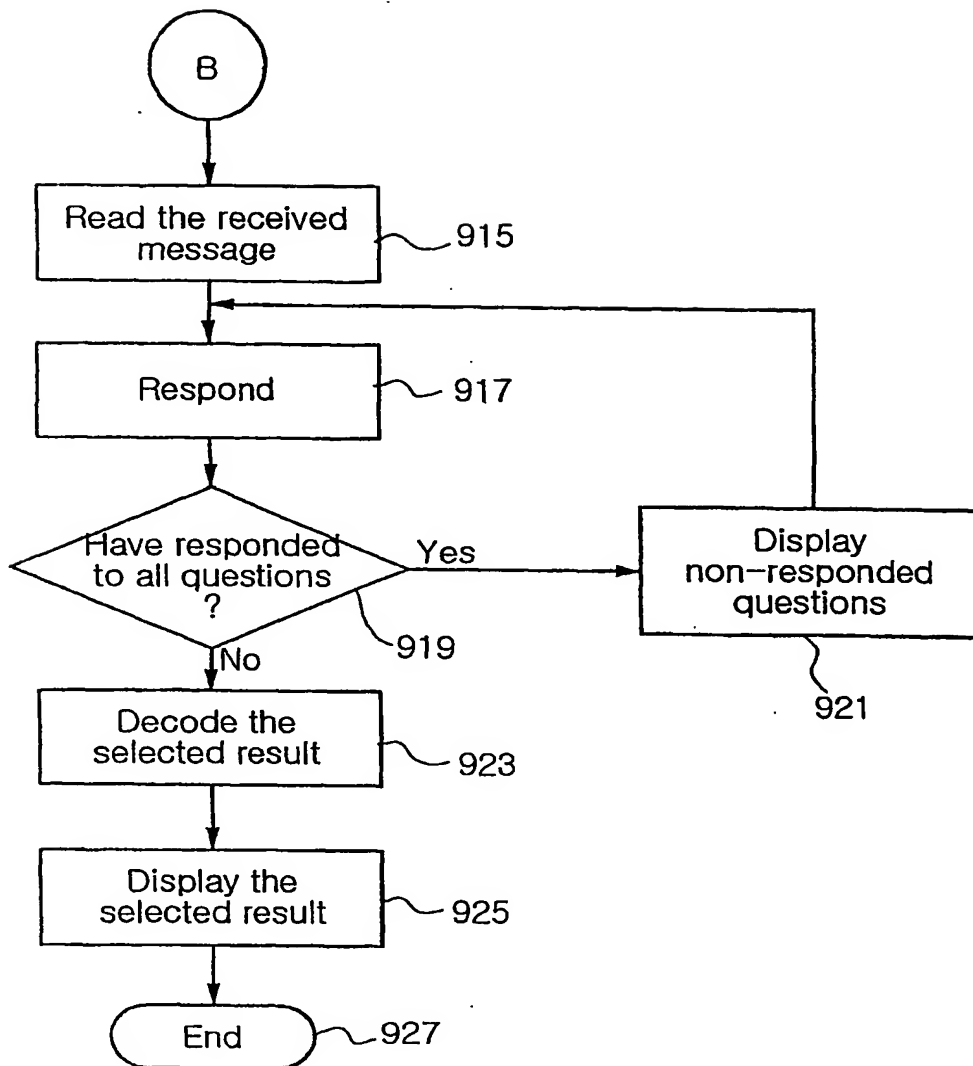


FIG. 9b

13/13

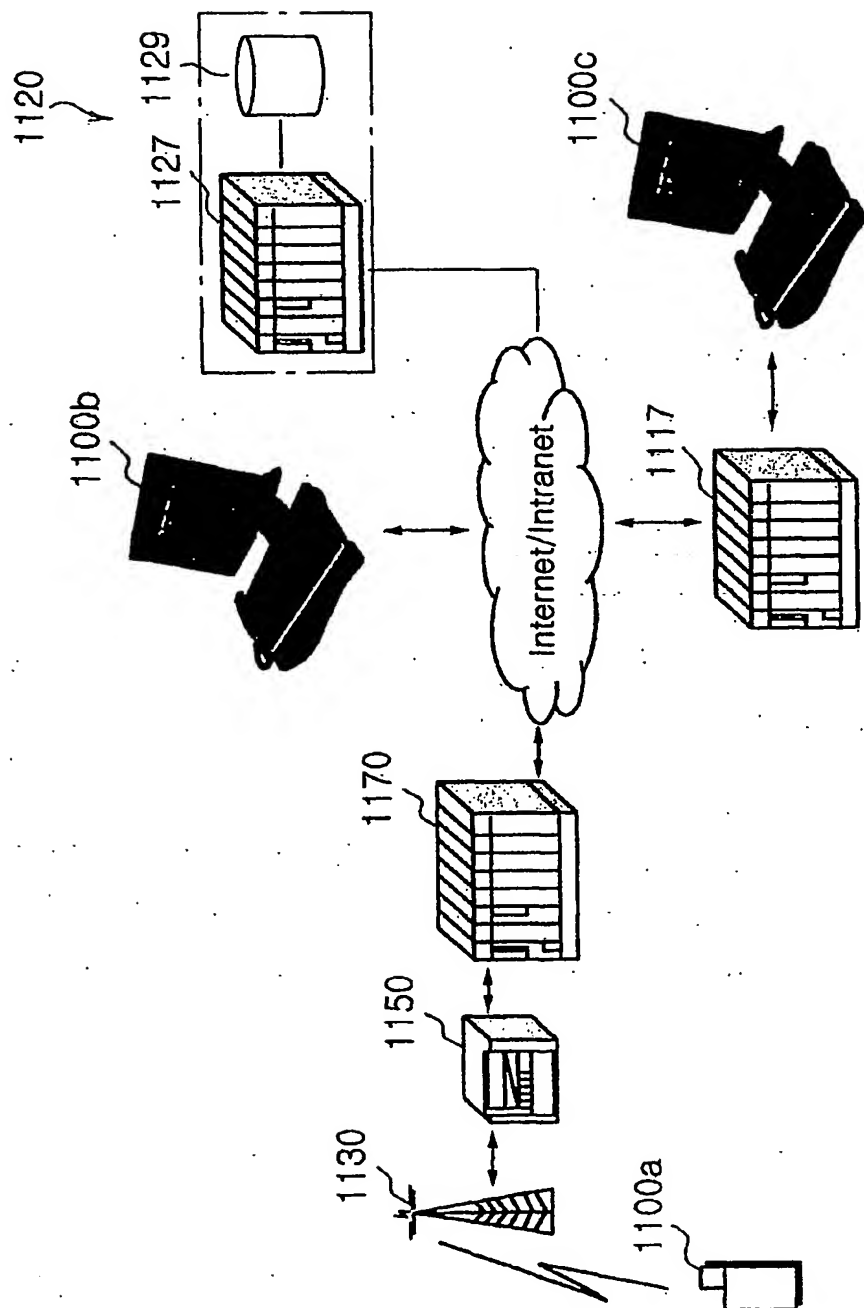


FIG. 10

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR01/02233

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 G06F 17/60**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

G06F 17/60, G06F 19/00, G06F 17/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, PAJ, IEEE/IEE Electronic Library(Since 1988) "e-mail, research, survey, statistics"

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 2000-59118 A (Q SURVEY) 5 OCTOBER 2000 see the whole document	1-5,7-9,12-14
Y	KR 2000-49601 A (LEE YEUN-WOO) 5 AUGUST 2000 see the whole document	1-5,7-9,12-14
A	KR 2000-49602 A (LEE YEUN-WOO) 5 AUGUST 2000 see the whole document	1-5,7-9,12-14

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

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25 FEBRUARY 2002 (25.02.2002)

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